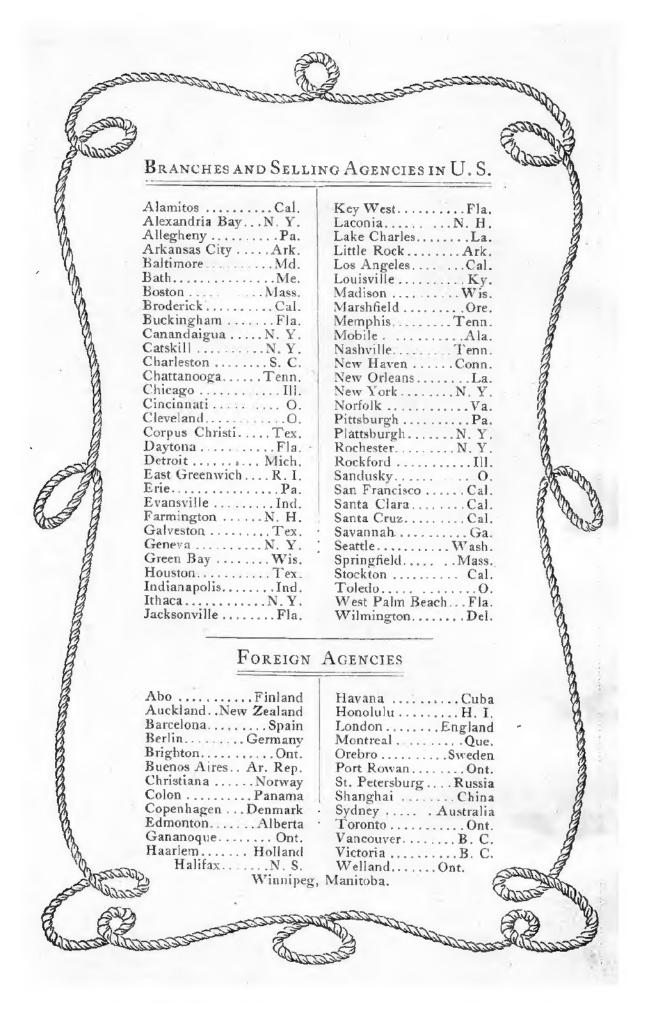
Buffalo

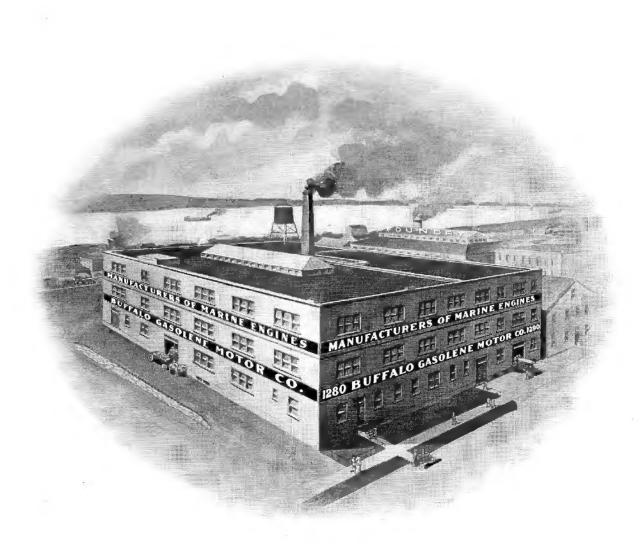
Gasolene Motor Co.

[INCORPORATED 1899]



1280-1290 Niagara Street Buffalo, N. Y. A. S. A.

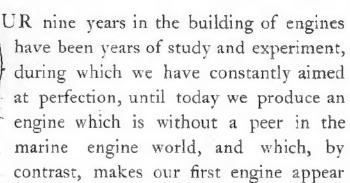






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Introductory



crude, though at the time it was pronounced the best by yachtsmen.

We have avoided the two extremes—an extreme light weight on one hand, which means weakness and unreliability, and ponderous bulkiness on the other—and have arrived at a medium weight which combines the advantages of both without the disadvantages of either: a weight which science has determined to be the best.

¶ In the back of this catalogue we are showing a line of slow speed engines that we have designed for heavy working boats. They are built to stand the hardest kind of work, and will meet with the same high approval as our regular yacht engines.

¶ Trusting we may have the pleasure of serving you, we remain,

Yours very truly,
BUFFALO GASOLENE MOTOR CO.

A Brief Description

E manufacture four-cycle engines only, which are the most practical, economical and reliable engines built. In designing our engines simplicity and easy access to every part was kept in view, and we now have a motor that is easy to operate, and every part can be easily removed without disturbing any other part.

The crank shafts in our motors are steel forgings, and are ground to size. On these are adjusted ring oilers, by means of which the oil is thrown into the bearings, thus making lubrication positive and doing away with the splash system, which is neither desirable nor reliable.

The ring oilers, main base bearings and cylinders are lubricated by means of a neat multiple oiler, which is put on the motor in such a way that it can be adjusted and kept horizontal even if the motor is set at an angle in the boat.

The connecting rods are also steel forgings having an adjustment at the top for the cross-head. The piston and piston rings are made of special grey iron, and both are ground, so that perfect compression is assured.

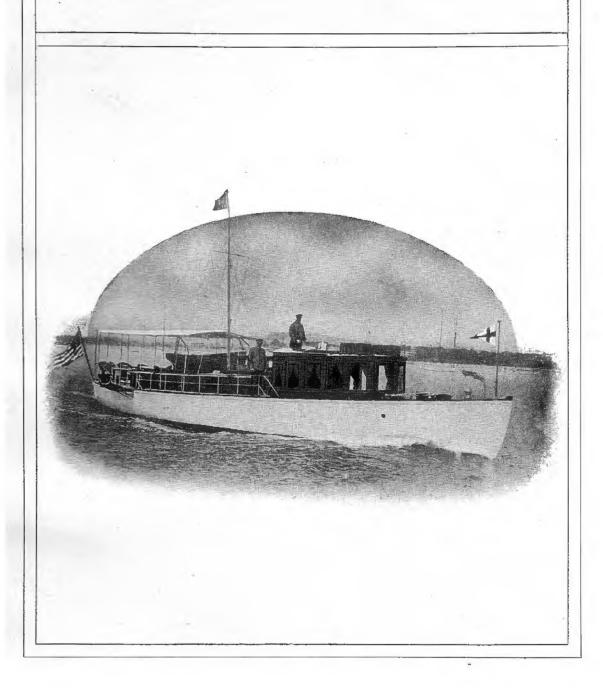
The uprights, cams, valves and lifters are also made of the best steel; the valve lifters are made of square stock and work in bronze casings which are put into the crank chamber, thus preventing them from rusting or sticking.

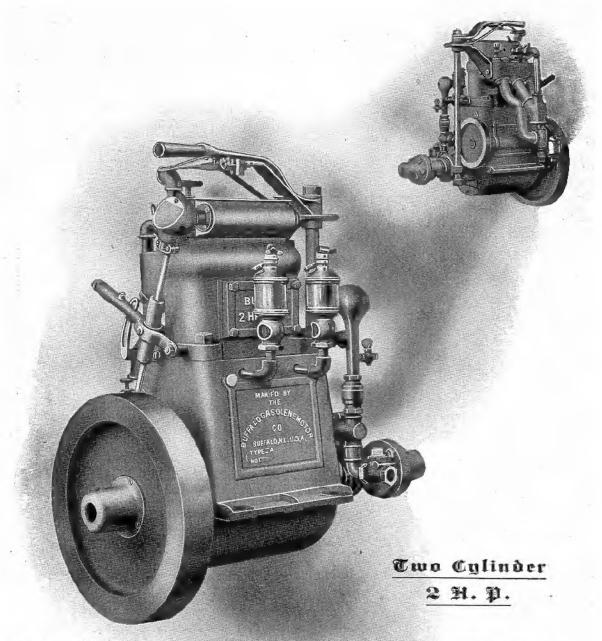
Both inlet and exhaust valves are mechanically operated, and the valve cams instead of being pinned on the cam shaft are held in place by means of Woodruff keys, making it possible to easily remove them and to also get them back in exactly the right position. Our motors are equipped with the jump spark or the make and break system of ignition. Our make and break spark plugs are perfection, and can be easily

A Brief Description

removed from the motor. The sparker cams are carried on a square cam shaft, which renders it impossible for the cam to slip and get out of time.

All our motors are equipped with a float feed carburettor, by means of which they can be throttled to a very slow speed and still get an equal amount and quality of mixture; this can be done without flooding, which is of great importance, especially in a cabin boat.





Bore, 2½ inches; stroke, 4 inches; weight, 135 pounds; diameter of fly-wheel, 12 inches; diameter of crank shaft, 1 inch.

Height center of crank up, 16 inches.Center of crank down, 4 inches.Width of space between foundation blocks, 7½ inches.

Width of base over all, 10 inches. Length over all, 12 inches. Length of foundation, 9 inches.

SPEED: CHANGED INSTANTLY AT WILL { 750 Normal. 200 Minimum.

One 1-inch pipe outlet for both exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Two H. P. Two Cylinder Four-Cycle Outfit No. 00 Motor.—Coil, switch, batteries, muffler (if desired), set of tools, oil cups, starting crank, float feed carburettor, plunger pump attached, and instruction book.

PRICE: \$135.00

Net extra for dynamo, \$22.00



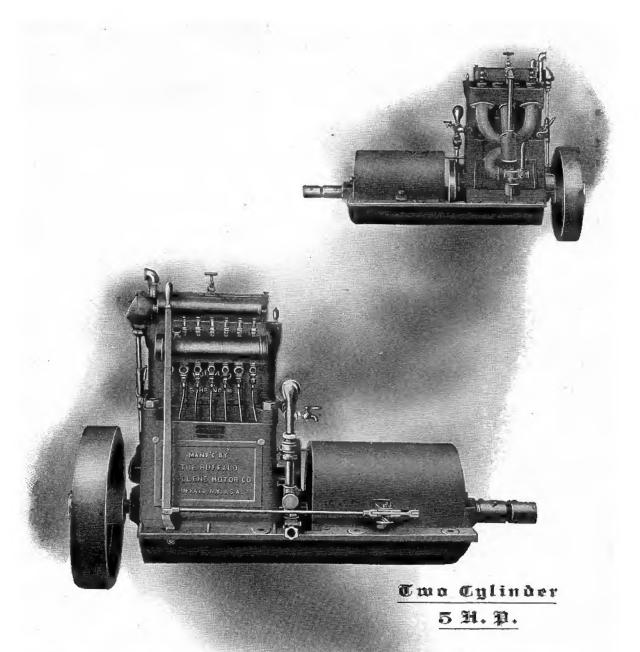
Two H. P. Two Cylinder Four-Cycle Outfit No. 0 Motor.—Reversible two-blade 12-inch propeller, including bronze stuffing box, tube, steel shaft and levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), oil cups, ball thrust and bearing, plunger pump attached, starting crank, 12 feet of rubber covered insulated copper wire, lag screws, 3/8-inch three-way sea-cock, float feed carburettor, two 16-inch brass unions, 15 feet of copper pipe, two 1/8-inch gasolene globe valves and instruction book.

PRICE: \$155.00

Net extra for Tobin bronze shaft for salt water, \$4.00
Net extra for dynamo, \$22,00

Eight foot shaft will be supplied unless otherwise specified. Bronze shaft in excess of this length, \$1.00 per foot extra.

This motor also furnished with solid wheel and shaft, and friction clutch, at same price as Outfit No. 0.



Bore, 3½ inches; stroke, 5 inches; weight, 260 pounds, without reverse gear; weight, 350 pounds, with extension base and reverse gear; diameter of fly-wheel, 16 inches; diameter of crank shaft, 1¼ inches.

Height center of crank up, 19 inches. Center of crank down, 4½ inches. Width of space between foundation blocks, 9 inches.

Width of base over all, 12 1/4 inches.

Length over all, including coupling, 30 3/4 inches.

Length of foundation, 9 3/4 inches.

When reverse gear is attached, add 18½ inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL { 600 Normal. 150 Minimum.

One 11/4 inch pipe outlet for both exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 1 5 H. P. Two Cylinder Four-Cycle Motor Coil, switch, batteries, muffler (if desired), set of tools, starting crank, float feed carburettor, plunger pump attached, 7-feed multiple oiler, and instruction book.

PRICE: \$275.00

Net extra for dynamo, \$22.00



Outfit No. 2 5 H. P. Two Cylinder Four-Cycle Motor Reversible two-blade 16-inch propeller or 14inch three-blade propeller, including bronze stuffing box, steel shaft, and levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting crank, 15 feet of rubber covered copper insulated wire, lag screws, 1/2 inch three-way sea-cock, water scoop, float feed carburettor, two 1/8-inch brass unions, 15 feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$320.00 Net extra for Tobin bronze shaft for salt water, \$7.50 Net extra for dynamo, \$22.00

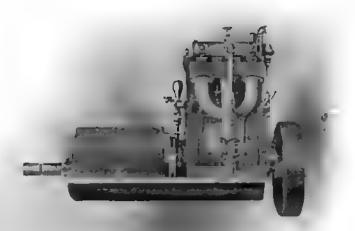
Eight foot shaft will be supplied unless otherwise specified. Bronze shaft in excess of this length, \$1.25 per foot extra.

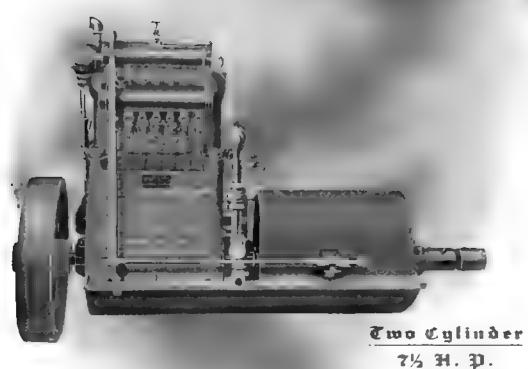


Outfit No. 3 5 H. P. Two Cylinder Four-Cycle Motor Reverse gear, clutch, levers and fittings, coupling, 10 feet 1-inch steel propeller shaft, bronze stuffing box, end bearing, solid 14-inch three-blade bronze propeller, set of tools, coil, switch. batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting crank, 15 feet of rubber covered insulated copper wire. lag screws, 1/2-inch three-way sea-cock, water scoop, float feed carburettor, two 1/8-inch brass unions, 15 feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$350.00 Net extra for Tobin bronze shaft for salt water, \$7.50
Net extra for dynamo, \$22.00

Bronze shaft in excess of 10 feet, \$1.25 per foot extra.





Bore, 414 inches; stroke, 5 inches; weight, 390 pounds, without reverse gear; weight, 500 pounds, with extension base and reverse gear; diameter of fly-wheel, 16 inches; diameter of crank shaft, 136 inches.

Height center of crank up, 22 inches Center of crank down, 5½ inches. Width of space between foundation blocks, 11 inches. Width of base over all, 14½ inches. Length over all, including coupling, 33 inches. Length of foundation, 13½ inches.

When reverse gear is attached, add 19½ inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL | 600 Normal of OPERATOR, | 150 Minimum.

One 1½ inch pipe outlet for both exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 4 7½ H. P. Two Cylinder Four-Cycle Motor.—Coil, switch, batteries, muffler (if desired), set of tools, starting crank, float feed carburettor, plunger pump attached, 7-feed multiple oiler, and instruction book.

> PRICE: \$350.00 Net extra for dynamo, \$22.00



Outfit No. 5 7 1/2 H. P. Two Cylinder Four-Cycle Motor.—Reversible two-blade 18-inch propeller or three blade 16-inch propeller, including bronze stuffing box, steel shaft and levers complete, coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting crank, 15 feet of rubber covered insulated copper wire, lag screws, ½-inch three-way sea-cock, water scoop, float feed carburettor, two 1/8-inch brass unions, 18 feet of copper pipe, two 1/26-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$400.00

Net extra for Tobin bronze shaft for salt water, \$10.00
Net extra for dynamo, \$22.00

Eight foot shaft will be supplied unless otherwise specified. Bronze shaft in excess of this length, \$1.25 per foot extra.

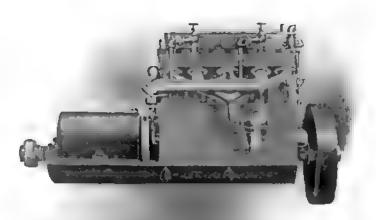


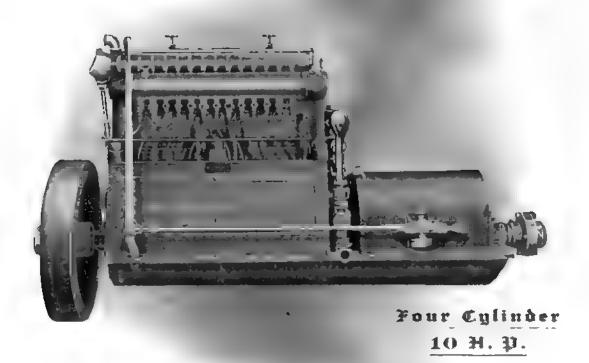
Outfit No. 6 7½ H. P. Two Cylinder, Four-Cycle Motor.—Reverse gear, clutch, levers and fittings, coupling, 10 feet 1-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 16-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting crank, 15 feet of rubber covered insulated copper wire. lag screws, ½-inch three-way sea-cock, water scoop, float feed carburettor, two 1/8-inch brass unions, 18 feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$475.00

Net extra for Tobin bronze shaft for salt water, \$10.00

Net extra for dynamo, \$22.00





Bore, 3½ inches; stroke, 5 inches; weight, 410 pounds, without reverse gear; weight, 560 pounds, with extension base and reverse gear; diameter of fly wheel, 16 inches; diameter of crank shaft, 1½ inches.

Height center of crank up, 19% inches. Center of crank down, 4% inches. Width of space between foundation blocks, 9% inches. Width of base over all, 13 inches. Length over all, including coupling, 41% inches. Length of foundation, 19% inches.

When reverse gear is attached, add 193/4 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL | 600 Normal 125 Minimum.

One 11/4 inch pipe outlet for four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 7 10 H. P. Four-Cylinder Four-Cycle Motor.—Coil, switch, batteries, muffler (if desired), set of tools, starting crank, float feed carburettor, plunger pumps for air and water attached, 13 feed multiple oiler and instruction book.

PRICE: \$475.00

Net extra for dynamo, \$22.00



Outfit No. 8 10 H. P. Four Cylinder Four-Cycle three-blade propeller, including bronze stuffing box, steel shaft levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, starting crank, 18 feet of rubber covered insulated copper wire, lag screws, 1/2-inch three-way sea cock, water scoop, float feed carburettor, two 1/4-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

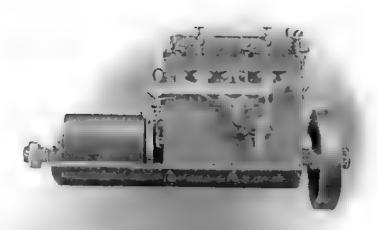
PRICE: \$525.00 Net extra for Tobin bronze shaft for salt water, \$12.50
Net extra for dynamo, \$22.00

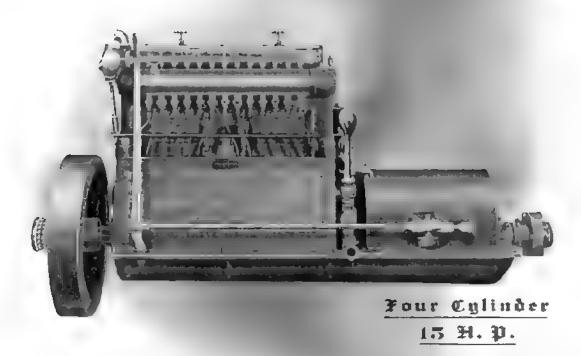


10 H. P. Four Cylinder Four-Cycle Outfit No. 9 Motor. - Reverse gear, clutch, levers and fittings, coupling, 10 feet 1 1/4-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 18-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, starting crank, 18 feet of rubber covered insulated copper wire, lag screws, ½-inch three-way sea cock, water scoop, float feed carburettor, two 1/2-inch brass unions, 20 feet of copper pipe, two 1/8 inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$600,00

Net extra for Tobin bronze shaft for salt water, \$12.50 Net extra for dynamo, \$22.00





Bore, 4½ inches; stroke, 5 inches; weight, 675 pounds, without reverse gear; weight, 820 pounds, with extension base and reverse gear; diameter of fly-wheel, 18 inches; diameter of crank shaft, 1¾ inches.

Height center of crank up, 21% inches. Center of crank down, 5½ inches. Width of space between foundation blocks, 11 inches.

Width of base over all, 14½ inches Length over all, 27¾ inches. Length of foundation, 24% inches.

When reverse gear is attached, add 20 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL { 600 Normal. 125 Minimum.

One t 1/2 inch pipe outlet for four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 10 ¹⁵ H. P. Four Cylinder Four-Cycle Motor. Coil, switch, batteries, muffler (if desired), set of tools, ratchet lever starter, float feed carburettor, plunger pumps for air and water attached, 13 feed multiple oiler, and instruction book.

PRICE: \$715.00 | Net extra for dynamo, \$22.00



Outfit No. 11

15 H. P. Four Cylind r Four-Cycle Motor—Reversible 22-inch two-blade or 20-inch three-blade propeller, including bronze stuffing box, steel shaft and levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 18 feet of rubber covered insulated copper wire, lag screws, ¾-inch three-way sea cock, water scoop, float feed carburettor, two ⅓-inch brass unions, 20 feet of copper pipe, two ⅓-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$785.00

Net extra for Tobin bronze shaft for salt water, \$18.00 Net extra for dynamo, \$22.00

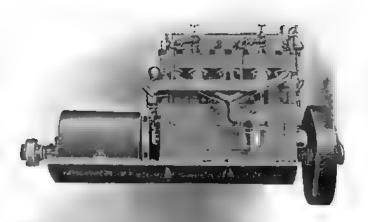


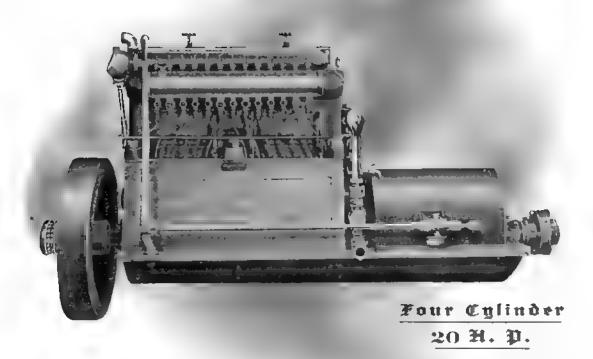
Outfit No. 12

15 H. P. Four Cylinder Four-Cycle Motor. — Reverse gear, clutch, levers and fittings, coupling, 10 feet 1½ inch steel shaft, bronze stuffing box, end bearing, solid three-blade 20-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 18 feet of rubber covered insulated copper wire, lag screws, ¾-inch three-way sea cock, water scoop, float feed carburettor, two ⅓-inch brass unions, 20 feet of copper pipe, two ⅙-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$850.00

Net extra for Tobin bronze shaft for salt water, \$18 00 Net extra for dynamo, \$22.00





Bore, 5 inches; stroke, 6 inches; weight, 945 pounds, without reverse gear; weight, 1250 pounds, with extension base and reverse gear; diameter of fly-wheel, 22 inches; diameter of crank shaft, 2 inches.

Height center of crank up, 25¼ inches. Center of crank down, 6 inches. Width of space between foundation blocks, 12 inches.

Width of base over all, 16½ inches. Length over all, 31% inches. Length of foundation, 27¾ inches.

When reverse gear is attached, add 25½ inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL { 500 Normal. 125 Minimum.

One 2-inch pipe outlet for four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 13 20 H. P. Four Cylinder Four-Cycle Motor.—Coil, switch, batteries, muffler (if desired), set of tools, ratchet lever starter, float feed carburettor, plunger pumps for air and water attached, 13-feed multiple oiler, and instruction book.

PRICE: \$900.00

Net extra for dynamo, \$22.00



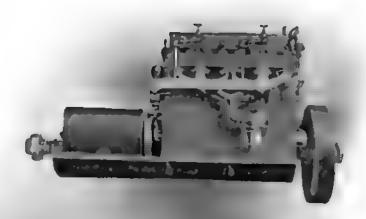
Outfit No. 14 20 H. P. Four Cylinder Four-Cycle Motor.—Reversible 26-inch two-blade or 24inch three-blade propeller, including bronze stuffing box, steel shaft, and levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 25 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, water scoop, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, 13-feed multiple oiler, and instruction book.

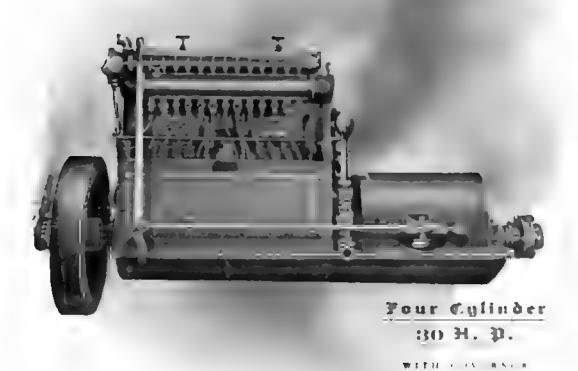
PRICE: \$1,015.00 Net extra for Tobin bronze shaft for salt water, \$25.00 Net extra for dynamo, \$22.00



Outfit No. 15 20 H. P. Four Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers, and fittings, coupling, 10 feet 13/4-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 24-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 25 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock. water scoop, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$1,125.00 Net extra for Tobin bronze shaft for salt water, \$25.00 Net extra for dynamo, \$22.00





Bore, 6 inches; stroke, 7 inches; weight, 1325 pounds, without reverse gear; weight, 1600 pounds, with extension base and reverse gear; diameter of fly wheel, 24 inches; diameter of crank shaft, 21/4 inches.

Height center of crank up, 28¼ inches. Center of crank down, 7¼ inches. Width of space between foundation

Width of base over all, 18½ inches Length over all, 4 feet 5¾ inches. Length of foundation, 33 inches.

When reverse gear is attached add 29 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL { 450 Normal, of OPERATOR, 100 Minimum.

One 2-inch pipe outlet 1. 'four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 16 30 H. P. Four Cylinder Four-Cycle Motor.— Coil, switch, batteries, muffler (if desired), set of tools, ratchet lever starter, float feed carburettor, plunger pumps for air and water attached, 13 feed multiple oiler, and instruction book.

PRICE: \$1,465.00 Net extra for dynamo, \$22.00

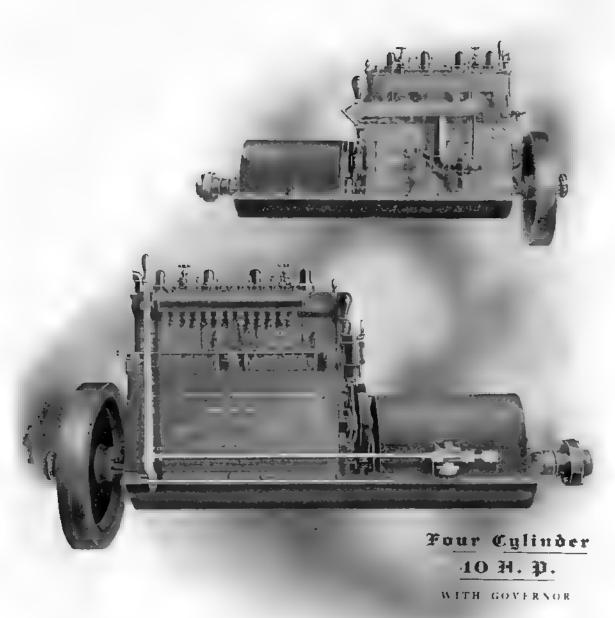


Outfit No. 17 30 H. P. Four Cylinder Four-Cycle Motor. —Reverse gear, clutch, levers and fittings, coupling, 10 feet 2-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 26-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 20 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea cock, water scoop, float feed carburettor, two ¼-inch brass unions, 25 feet of copper pipe, two ¼-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$1,700.00

Net extra for Tobin bronze shaft for salt water, \$30.00 Net extra for dynamo, \$22.00

Bronze shaft in excess of 10 feet, \$3.25 per foot extra.



Bore, 7 inches; stroke, 8 inches, weight, 2550 pounds, with reverse gear complete; diameter of fly-wheel, 28 inches; diameter of crank shalf, 21/2 inches.

Height center of crank up, 34% inches. Center of crank down, 8% inches. Width of space between foundation blocks 16% inches

Width of base over all, 22 inches. Length over all, 76 1% inches. Length of foundation, including reverse gear, 70 % inches.

SPEED: CHANGED INSTANTLY AT WILL \ 400 Normal. 100 Minimum.

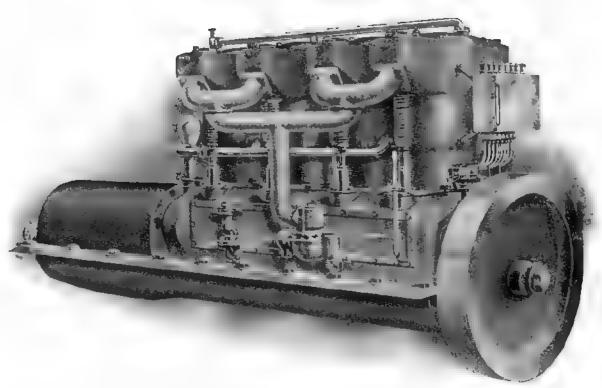
One 2½ inch pipe outlet for four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

Outfit No. 18

40 H. P. Four Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers, and fittings, coupling, 10 feet 2½-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 34-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, ratchet lever starter, 30 feet of rubber covered insulated copper wire, lag screws, 1½-inch three-way sea cock, water scoop, float feed carburettor, two ¼-inch brass unions, 25 feet of copper pipe, two ¼-inch gasolene globe valves, 13 feed multiple oiler, and instruction book.

PRICE: \$2,250.00 | Net extra for Tobin bronze shaft for salt water, \$37.50 Net extra for dynamo, \$22.00

Bronze shaft in excess of 10 feet, \$4.00 per foot extra.



Four Cylinder 65 H. P.

WITH GOVERNOR

Bore, 8½ inches; stroke 9 inches; weight complete, including reverse gear and fly-wheel, 3250 pounds; diameter of fly-wheel, 28 inches; diameter of crank shaft, 2½ inches.

Height center of crank up, 35 inches. Center of crank down, 10 inches. Width of space between foundation blocks, 21½ inches.

Width of base over all, 27½ inches. Length over all, 92½ inches. Length of foundation, including reverse gear, 86¼ inches.

SPEED: CHANGED INSTANTLY AT WILL { 375 Normal. 90 Minimum.

One 3½ inch pipe outlet for four exhaust ports. Motor furnished with either make and break or jump spark ignition, as desired.

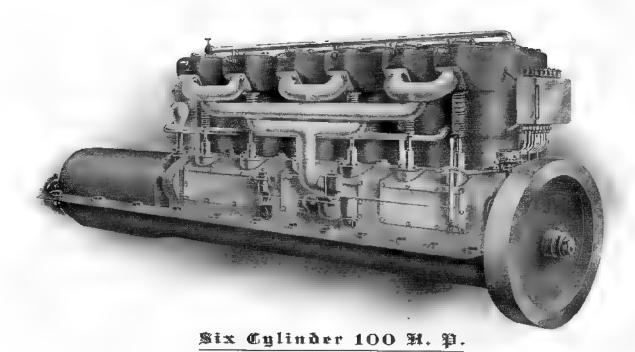
Outfit No. 19 65 H. P. Four Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers, and fittings, coupling, 10 feet of 2½ inch steel shaft, bronze stuffing box, end bearing, solid three-blade 36 to 38 inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, air starter, 30 feet of rubber covered insulated copper wire, lag screws, 1¼-inch three-way sea-cock, water scoop, float feed carburettor, two ¾-inch brass unions, 30 feet of copper pipe, two ¾-inch gasolene globe valves, force feed oiler, and instruction book.

PRICE: \$3,500.00

Net extra for Tobin bronze shaft for salt water, \$47.50

Net extra for dynamo, \$22.00

Bronze shaft in excess of 10 feet, \$5.00 per foot extra.



WITH GOVERNOR

Bore, 8½ inches; stroke, 9 inches; weight complete, including reverse gear and fly-wheel, 4625 pounds; diameter of fly-wheel, 28 inches; diameter of crank shaft, 3 inches.

Height center of crank up, 35 inches. Center of crank down, 10 inches. Width of space between foundation blocks, 21½ inches.

Width of base over all, 27½ inches. Length over all, 114% inches. Length of foundation, including reverse gear, 111 inches.

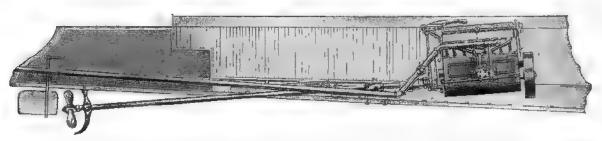
SPEED: CHANGED INSTANTLY AT WILL \ 375 Normal. 90 Minimum.

One 4 inch pipe outlet for six exhaust ports. Motor furnished with make and break or jump spark ignition, as desired.

Outfit No. 20 Motor.—Reverse gear, clutch, levers, and fittings, coupling, 10 feet of 23/4-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 42 to 45-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pumps for air and water attached, air starter, 40 feet of rubber covered insulated copper wire, lag screws, 1 1/2-inch three-way sea-cock, water scoop, float feed carburettor, two 3/8-inch brass unions, 35 feet copper pipe, two 3/8-inch gasolene globe valves, force feed oiler, and instruction book.

PRICE: \$5,300.00 Net extra for Tobin bronze shaft for salt water, \$57.50
Net extra for dynamo, \$22.00

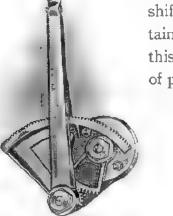
Bronze shaft in excess of 10 feet \$6.00 per foot extra.



10 H. P. MOTOR IN TORPEDO STEKN BOAT, SHOWING REVERSIBLE PROPELLER

OTE the compactness of the compounded reversing device and the leverage. With this new method the blades can be reversed or held to any pitch without the sudden jerking of the reversing lever common to reversible propellers.

The shifting yoke on propeller shaft instead of binding on the shaft, when the blades are being shifted, engages with a hardened collar which contains ball bearings and revolves on the shaft. In this way the reversing can be done without waste of power due to friction.



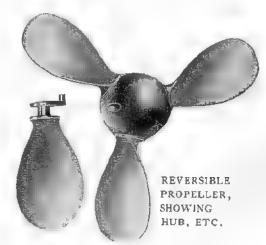


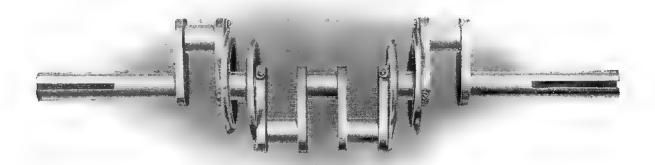
CONNECTING ROD

The connecting rods are steel drop forgings, bushed with bronze at the wrist pin ends. Connecting rod boxes are of a special non-heating bronze, lined with babbitt.

Our reversible propellers are all made with round hub, which does not disturb the water at that point, nor do they wind up with weeds so easily.

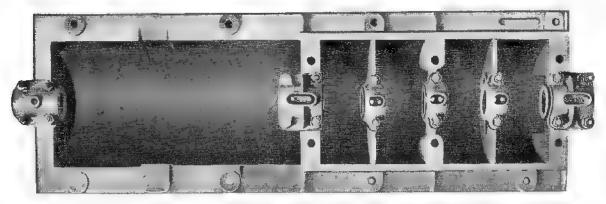
All parts are accurately machined and are interchangeable. They are made of the best of bronze, which makes them very tough.





CRANK SHAFT WITH RING OILERS

HE crank shafts are all made of drop forgings, and have bearings between each throw of the crank. This gives additional strength, insures perfect alignment and prevents them from springing. All pins on our cranks are ground. This means cool journals and an easy running machine.



BASE

Instead of depending on splash for lubricating the journals, ring oilers are adjusted on the cranks, which throw the oil into the center of the bearings.



RING OILER

Both pistons and rings are made of special grey iron, and both are ground. In this we get perfect compression and hold it.

The piston pin is stationary; it is also hollow and conveys oil to the top bearing of connecting rod.



Testimonials

Buffalo Gasolene Motor Works,

DETROIT, MICH., May 22, 1906.

BUFFALO, N. Y.

Gentlemen:—Your Mr. H. H. Smith has recently installed for us in our new sixty (60') foot launch, built at Muskegon by the Racine Boat Mfg. Co, one (1)

of your thirty (30) horse power, four (4) cylinder, four (4) cycle motors.

This engine was run idle for a few hours with the boat moored to the pier at Muskegon. The first time the lines were cast off from the pier the boat started on her seven hundred (700) mile trip to Detroit, with Mr. D. B. Duffield, President of the Club in charge of the boat, myself Vice-President, your Mr. H. H. Smith in charge of the engine, and a boat man. Our first run was for twenty-three (23) consecutive hours, when we tied up at Charlevois. From there to Detroit we made but four (4) stops, and in all that distance all the attention the engine needed was the cleaning of the carburettor once on Lake Michigan; the balance of the time the engine ran perfectly, oiling being the only attention it required. Mr. Smith guaranteed to us an eight (8) mile boat. We used a log continually while in the larger lakes, and under favorable conditions we think the boat will run from two (2) to two and one-half (2½) miles faster than the above figure on the normal number of revolutions of the engine.

This speaks wonderfully well for your engine, and we are very glad indeed to

be able to report such an experience with a brand new engine.

Yours truly,

C. A. NEWCOMB,

Chairman of Launch Committee,

Buffalo Gasolene Motor Co.,

NEW YORK, N. Y., October 20, 1906.

BUFFALO, N. Y.

Dear Sirs:—I am sending you under separate cover a photograph of my hunting cabin cruiser "Kahank", in which I installed one of your ten horse power motors last spring, and desire to express my satisfaction with the manner in which the motor has acted during the summer season. I have used the boat constantly and it has never failed me once. In addition to this I have not had one part break, and, after using it the entire season, I consider the motor is in better condition than the day I received it owing to the fact that the newness has been worn out of it.

If I can get a proper figure for my boat, I intend to dispose of her and build a larger boat, in which it is my intention to install a twenty horse power engine of

your make.

I might further state that the two horse power motor, which I bought from you last summer, I sold the early part of this summer for twenty-five dollars more than I paid for it new.

In closing I beg to say that you are at liberty at any time to refer to me.

Yours very truly,

H. CLAY MINER.

Buffalo Gasolene Motor Co.,

PLATTSBURGH, N. Y., October 15, 1906.

BUFFALO, N. Y.

Gentlemen: — Will you please send me 4 "sparking plugs" (I think they are called) studs like, they are on the lower end of the bolts that go through the cylinder cups or heads, through which the electric current passes, or those points between which the spark is formed when they drop apart.

If you will send them by mail, I will remit by return mail.

This is the third season that the machine has been running, and the plugs are the first repairs that I have had to put onto it; a 7½ H. P.

Respectfully,

F. M. SWIFT, M. D.

Buffalo Gasolene Motor Co.,

LITTLE ROCK, ARK., January 19, 1905

BUFFALO, N. Y.

Dear Sirs:—I desire to say that we have used your Buffalo engine for about nine months, and that the same has given us perfect satisfaction, developing plenty of power, with a very small amount of gasolene used. We have had very little trouble in the way of repairs, and most of the trouble we have had came from pure ignorance and lack of knowledge as to how to handle it. Whenever it has been handled properly it has given the most complete satisfaction, and we are now all experts and willing to take on our shoulders the blame of all the mishaps we have had with it.

We know now the fault was ours and not the machine's, and we have no hesitation in saying that we regard it as the best gasolene engine on the Arkansas River, having tested it in competitive trials with some others.

Very truly,

J. M ROSE,

Pres. Pulaski Boat Club.

Ruffalo Gasolene Motor Co.

SACRAMENTO, CAL., Oct. 3, 1906.

BUFFALO, N. Y.

Dear Sirs :- I suppose you think I have forgotten to let you know how the engine you sold me works.

I must say I am perfectly satisfied with it and I am glad it was a "Buffalo" I

We had it out Sunday for the first time and it made good. We had ten in the boat, and she moved right along. Everybody who has seen her say she is a beauty.

Quite a few said it is the best engine they have seen—there is such good workmanship on it. I think it is the first "Buffalo" on the Sacramento River; and I hope there are more to follow.

Mr. Russic deserves credit for the good job he has done on it.

Yours very truly,

GEÖRGE R. LOCKE,

1701 K ST.

Buffalo Gasolene Motor Co.

MARTINS FERRY, OHIO, Oct. 6, 1906.

BUFFALO, N. Y.

Gentlemen: -- I write this to you thanking you for the motor which I purchased of you last spring. Your motor is without a fault, and I consider it the simplest. most durable, economical and powerful, as well as handsomest motor made. Why do I say this? Because it is easy to handle, easy to start, always ready to run, and keeps on running till you stop it. Besides it is an ornament in a boat. It is quite a pleasure to get in your launch, turn on your gasolene, throw in your switch, turn your wheel one quarter turn, advance your spark a little, and never look at it again till you want to stop. The lubrication is perfect, the ignition is perfect, and the machine itself is the most perfect of them all. I would advise all prospective purchasers if they want pleasure and not trouble, by all means let it be a "Buffalo. there is anything more you want to know about my 10 H. P. "Buffalo," call on me and I will demonstrate to you the above. Thanking you for your engine, and courtesy shown me, beg to remain yours with success for the "Buffalo."

D. E. DAGUE, 15 N. 4th St., Martins Ferry, O.

Buffalo Gasolene Motor Co.,

PROVIDENCE, R. I., December 19, 1905.

BUFFALO, N. Y.

Dear Sirs: -We have been using one of your small (4 H. P.) engines for three years in Florida. We could not ask for a better engine, as it has proven highly satisfactory in every respect. I am writing now, however, for any printed matter which you may have concerning late improvements or any convenient accessories. Yours respectfully

Thanking you in advance,

WARD McLANAHAN, 12 Dean St., Attleboro, Mass. Buffalo Gasolene Motor Co.

FALL RIVER, MASS., Oct. 29, 1906.

BUFFALO, N. Y.

Gentlemen: - Early this Spring I bought a small boat from A. W. Cleveland, South Dartmouth, Mass. In this boat was a "Buffalo" 2 horse power 2 cylinder 4 cycle engine, which has proved extremely satisfactory to me in every way, and would recommend it to any one. I have raced this boat some in the Fall River Yacht Club, and there is some controversy in regard to the power of the engine, and not being a mechanic myself would like to have you answer me a few questions in regard to this engine. The engine is marked Type A No. 213. I would like to know the size of the stroke, and the bore, and to know how many revolutions this engine must make to obtain 2 horse power.

If you will answer this letter very quickly, I will be very grateful to you. Very respectfully yours,

G. L. PECKHAM.

P. S.—Enclosed please find special delivery and 2 cent stamp for return reply.

CIRCLE ISLAND,

Buffalo Gasolene Motor Co.,

BUCKEYE LAKE, O., November 30, 1906.

BUFFALO, N. Y.

Gentlemen: —Have purchased and operated eleven gasolene marine motors from 2 H. P. to 20 H. P. in past two years. Most of them proved unreliable, and expensive in operation, in fuel and repairs. But the 10 H. P. "Buffalo" purchased from you last August fully proves your statement that "Quality Counts," for it possesses all the good qualities possible to embody in a high-class motor, that is in every way reliable, durable, and economical in fuel consumption. Will send shipping instruc-Yours respectfully,

W. B. FENN. tions for 30 H. P. motor soon.

Per J. A FENN.

Buffalo Gasolene Motor Co.,

WISCASSET, ME., October 2, 1906.

BUFFALO, N. Y.

Gentlemen: -I tested my 10 H. P. 1905 "Buffalo" today five times, and it turned a 20 in. 25 in. pitch Harthan propeller 900 times a minute. The boat made at some times five and a half miles in twenty-two minutes. My engine is a wonder. If I had a light racing machine I haven't a doubt but that the engine would beat 1000 a minute easily. This is after a season of continuous running without any repairs, and without a delay of ten minutes for the entire year.

C. E. KNIGHT.

Buffalo Gasolene Motor Co.

PORTLAND, MAINE, January 30, 1906.

BUFFALO, N Y.

Gentlemen: —I am sending you the two cylinder heads of my "Buffalo". Will

you please put them in order and return them soon as they are ready?

Will you also suggest the best method for cleaning the valves? This little engine has a record for last season of running 27 consecutive Saturdays, Sundays, and Mondays, with a total expense for repairs amounting to 25 cents. I cannot say just how far I ran, but my gasolene bill for the season was \$35, and the repairs were for soldering the gasoline pipe. I bought a few extra parts, as you know, but have not been obliged to use them as yet. Yours truly,

FRANK E. TAFT, Com. P. P. B. Assn.

Buffalo Gasolene Motor Co.,

STUART, FLA., August 22, 1906.

BUFFALO, N. Y.

Gentlemen: -Please send me by express, one starting crank for my 5 H. P. "Buffalo" engine. Send bill and I will remit at once. I carelessly broke the one which came with the engine. Engine runs fine, don't give a moment's trouble. Please send crank as soon as you can, and oblige, Yours very truly C. W. CORBETT.

Buffalo Gasolene Motor Co.

WASHINGTON, D. C., Oct. 30, 1905.

1280 Niagara St., BUFFALO N. Y.

Gentlemen:—I want to tell you how well satisfied I am with the 5 H. P. "Buffalo" motor which I recently purchased from you and which arrived here in excellent condition. Its working far surpasses anything I have ever seen in a gasolene motor, and I have had lots of experience with them. It never fails to run, and when once started never stops until wanted. Its action I consider perfectly beautiful, as does every one else who has seen it. I installed it in a Truscott 18 ft. fan tail stern launch, and it rides fine, very little vibration and great speed. There is nothing hereabouts in the boat line that can catch me, that is any boat of equal size, and I can easily take the measure of most of the bigger ones. I am pleased to death with it, and wouldn't sell it for double the cost if I could not get another. I had no trouble at all putting it in, and in spite of all the "wise folks" who claimed it would half sink my boat, it does not go beyond its original water line. I am sure that although mine is the only "Buffalo" engine here, there will be plenty more next year. Every one who sees it wants one, and I take great pleasure in showing it. You can use my name as reference wherever you please.

Yours.

IRVIN H. HOLLANDER.

Buffalo Gasolene Motor Co,

ESSEX, N. Y., September 27, 1906.

BUFFALO, N. Y.

Gentlemen: -Now that the season is over, I feel that I must write a word in favor of the "Buffalo" motor.

I have run the 7½ H. P. motor which I purchased, about 3,000 miles, and have had practically no trouble whatever. I always feel that when I start for a run, that I will be able to return under my own power. I have not been towed once, but I have towed other boats home, but not one "Buffalo."

Please send me some catalogs and advertising matter. I have had a number of inquiries in regard to price, etc., about your motors, and think that I will be able to sell a number to parties building this winter.

Hoping to receive catalogs at once, I am

Yours truly,

CHARLES F. DERBY.

Buffalo Gasolene Motor Co.,

SAN FRANCISCO, CAL.. October 15, 1906.

BUFFALO, N. Y.

Dear Sirs:—I reply to your inquiry as to what I think of your 15 H. P. gasolene motor which I bought from you, will say the same has given perfect satisfaction.

It is speedy, economical, easily controlled, and very powerful, and I am pleased to state it has gone beyond my expectations. I, as an expert and mechanical engineer, having operated several makes of gas engines, know what to expect.

Will also say in the trial trip of this motor we made twenty-six miles without

a stop, everything working beautifully.

Trusting that you will have the success that your engines merit, on this coast, as I am thoroughly convinced that the "Buffalo" is not to be classed with the majority of cheap Eastern make engines, as the workmanship is perfect and the design beautiful.

Yours very sincerely,

J. M. OUGH.

Buffalo Gasolene Motor Co.,

OCEANPORT, N. J., Dec. 12, 1906.

BUFFALO, N. Y.

Gentlemen:—Your letter at hand, and I am very glad to tell you how much I am pleased with my 10 H. P. engine, purchased of you. I placed it in my boat "Lillie", 24 feet long, 4 feet beam, and she makes a speed of 16 miles over a measured course. It runs perfectly and I have not replaced anything about it. It turns 1000 revolutions per minute, with a 16 inch, 20 inch pitch 3 blade wheel, and about 900 revolutions per minute with 18 inch two blade.

Yours truly,

PERLY RIDDLE,

Oceanport, N. J.

Buffalo Gasolene Motor Co.,

NEW YORK, December 10, 1906.

1280-1288 Niagara St., Buffalo, N. Y.

Gentlemen:—Your favor of the 8th instant is duly received. When your Mr. Edge installed for me a 15 H. P. "Buffalo" in the "Totem" in June, 1905, I knew nothing of a gasolene motor, having been a sail boatman all my life. I bought the "Buffalo" on the advice of a friend who knows about motors, his comment being that the "Buffalo" was the nearest "fool-proof" of all of them. I accepted this criticism on my intelligence without a murmur, and did as I was bid, and I have never had cause to regret it.

During the past two seasons this "Buffalo" has never refused to run but once, and this was early in the game, and due entirely to my lack of experience. One of your mechanics had it going again in two minutes after he looked at it. It always goes when called upon, and once started it will run so long as you feed it gasolene. I have taken two trips down east, and on the last return trip, I ran 90 miles the first day and 100 miles the second day, all at top speed and without a

stop; you couldn't ask more.

I have become a regular "Buffalo" shouter, and am now figuring on a new boat, which will be driven with a 20 H. P "Buffalo"

Yours truly,

THOS. A. HINE.

Buffalo Gasolene Motor Co.,

NEWARK, N. J., December 11, 1906.

BUFFALO, N. Y.

Gentlemen:—I have your letter in which you state you would appreciate my sending you a testimonial to use in the '07 catalogue.

You say there is a particular reason why you desire this testimonial, likewise

there is a particular reason why I should wish to give one.

Since the installation of the 7½ H. P. two cylinder motor in my 25 foot launch last spring, with the exception of replacing the carburettor during the installation, I have not had the slightest difficulty with the entire outfit. Not even to the extent of changing a spark plug or the setting up of a new series of batteries. This statement may appear exaggerated, but it is the truth nevertheless. The oiling device is without doubt the best I have ever seen.

For this reason, I consider myself indebted to you for the thorough enjoyment my family and friends were accorded by the use of the "Buffalo" motor.

Sincerely yours,

H. MURRAY,

Buffalo Gasolene Motor Co.,

VINCENNES, IND, May 12, 1906.

BUFFALO, N. Y.

Gentlemen:—I am so much pleased with my new motor, that it is impossible for me to attempt to describe it. One turn of the crank is all that it is needed to start it, and should there be one explosion missed during a run of 10 hours, I certainly would be surprised. My son is using it hauling pearl buyers up and down the Wabash, and has a contract for 5 days out of the week for 6 months ahead. Last Tuesday it certainly had a severe test, as that was the day of the big storm, the waves were the very worst I ever saw on this river, and three of us rode them all day, while we got a severe drenching from the spray, and the bursting of the waves, the engine certainly did its part, never stopping in a single instance. We made a run Wednesday of 28 miles up stream in a fair current of 8 miles an hour, and from the time we started the engine, until we landed, we did not have our hand on it.

It is now conceded by all, that we have the finest outfit on the river. Our boat is constructed of steel, and 22 feet long, 5½ feet beam, and draws about 17 inches.

Respectfully,

L. D. SCOTT.

The Buffalo Centrifugal Pump

THE demand for an efficient, light and economical pumping outfit has been forcibly brought to our attention by the great number of inquiries we have had for something of this kind.

We have been manufacturing the "Buffalo" engines for years, so we set about to develop a pump that would meet the requirements. This we have succeeded in doing, and

with this pump and our regular engine we have an outfit that is very compact and one that will do more work in a given time, and at a less cost, than any other outfit of its kind on the market today.

The engine and pump are mounted on a base which insures perfect alignment for both, and greatly facilitates the installation. These outfits are particularly desirable for summer homes or hotels where there are no water works. By having a large tank in the upper part of the house, water can be pumped into it, and in this way it is possible to enjoy all the privileges one has in a city home.

The outfits will be known as A, B, C, D, etc.

OUTFIT "A"—Outfit "A" consists of a 2 H. P. two cylinder four-cycle motor and a centrifugal pump. This outfit will discharge 20 gallons of water per minute to a level of 40 feet, and will lift it 8 feet to the pump. Weight of complete outfit, 200 lbs. Price, \$225.00

OUTFIT "B"—Outfit "B" consists of a 5 H. P. two cylinder four-cycle motor and a centrifugal pump. This outfit will discharge 50 gallons of water per minute to a level of 40 feet, and will lift it 8 feet to the pump. Weight of complete outfit, 345 lbs. Price, \$400.00

OUTFIT "C"—Outfit "C" consists of a 7½ H. P. two cylinder four-cycle motor and a centrifugal pump. This outfit will discharge 75 gallons of water per minute to a level of 50 feet, and will lift it 8 feet to the pump. Weight of complete outfit, 515 lbs. Price, \$500.00

OUTFIT "D"—Outfit "D" consists of a 10 H. P. four cylinder four-cycle motor and a centrifugal pump. This outfit will discharge 100 gallons of water per minute to a level of 50 feet, and will lift it 8 feet to the pump Weight of complete outfit, 585 lbs. Price, \$660.00

N addition to our regular launch engines, we wish to call your attention to the different sizes of our slow speed engines.

The demand for an engine of this type has been growing, until today fishing boats, and, in fact, nearly all working boats, are looking for a motor that will

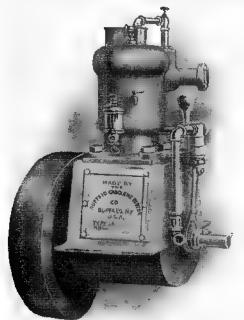
be reliable and one that will stand the hardest kind of usage.

Our years of experience in the marine engine business has particularly fitted us for the putting on the market an engine of this type, and we are positive that we have, in our slow speed engine, one that will not only please but satisfy the users of them.

¶ Hoping we may have the pleasure of demonstrating the superiority of our engines over others, we are,

Yours very truly,
BUFFALO GASOLENE MOTOR CO.





Single Cylinder 6 H. P.

Bore, 6 inches; stroke, 7½ inches; weight, with fly wheel, 825 pounds; diameter of flywheel, 24 inches; diameter of crank shaft, 2¼ inches.

Height center of crank up, 31 inches; center of crank down, 73% inches; width of space between foundation blocks, 15 inches; width of base over all, 19½ inches; length over all, 18 inches; length of foundation, 12½ inches.

SPEED: CHANGED INSTANTLY AT WILL { 350 Normal. 100 Minimum.

One 2-inch pipe outlet for exhaust port.

Outfit No. H1

Six H. P. Single Cylinder Four-Cycle Motor.—Coil, switch, batteries, muffler (if desired), set of tools, oil cups, starting lever, float feed carburettor, plunger pump attached, and instruction book.

PRICE: \$195.00 Net extra for dynamo, \$22.00

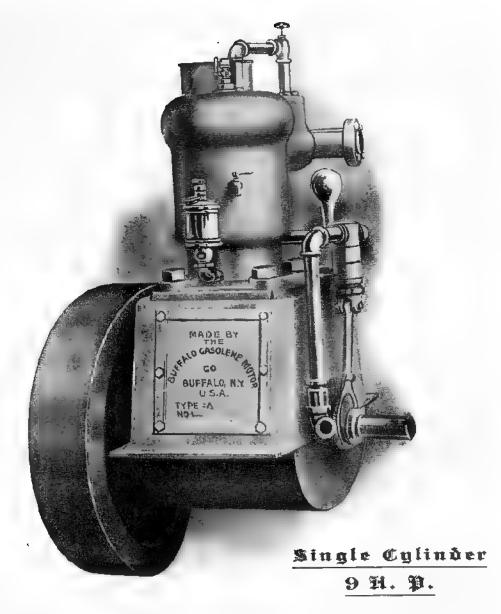


Outfit No. H2

Six H. P. Single Cylinder Four-Cycle Motor.—Reversible two-blade 18-inch propeller, including bronze stuffing box, steel shaft, and levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries muffler (if desired), oil cups, ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 34-inch three-way sea-cock, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, and instruction book.

PRICE: \$240.00

Net extra for Tobin bronze shaft for salt water, \$10.00 Net extra for dynamo, \$22.00



Bore, 7 inches; stroke, 9 inches; weight, 1223 pounds, without reverse gear; weight, with extension base and reverse gear, 1450 pounds; diameter of fly wheel, 28 inches; diameter of crank shaft, 2½ inches.

Height center of crank up, 35 inches. Center of crank down, 8½ inches. Width of space between foundation blocks, 17¼ inches.

Width of base over all, 22½ inches. Length over all, 21 inches Length of foundation, 14 inches.

When reverse gear is attached, add 24 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL \ 350 Normal. 100 Minimum.

One 21/2 inch pipe outlet for exhaust port.

9 H. P. Single Cylinder Four-Cycle Outfit No. H3 Motor.—Coil, switch, batteries, muffler (if desired), set of tools, starting lever, float feed carburettor, plunger pump attached, oil cups, and instruction book.

> PRICE: \$275.00 Net extra for dynamo, \$22.00

Outfit No. H4 9 H. P. Single Cylinder Four-Cycle Motor.—Reversible two-blade 22-inch propeller, including bronze stuffing box, steel shaft, and levers complete, also coupling, set of tools, spark coil, two pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/8-inch brass unions, 15 feet of copper wire, two 1/2-inch gasolene globe valves, oil cups, and instruction book.

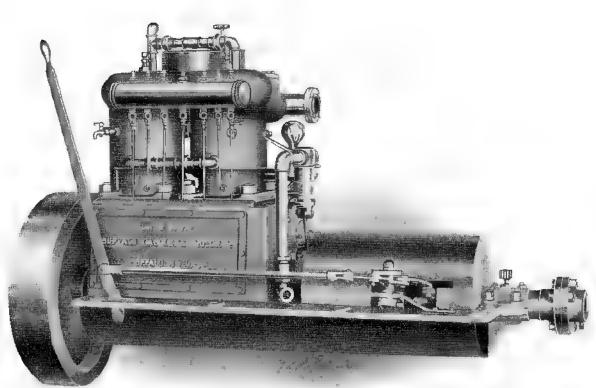
PRICE: \$325.00

Net extra for Tobin bronze shaft for salt water, \$7 50 Net extra for dynamo, \$22.00



Outfit No. H5 9 H. P. Single Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers and fittings, coupling, 10 feet 11/4-inch steel shaft, bronze stuffing box, end bearing, solid 20-inch three-blade bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/2-inch brass unions, 15 feet of copper pipe, two 1/2-inch gasolene globe valves, oil cups, and instruction book.

PRICE: \$375.00 | Net extra for Tobin bronze shaft for salt water, \$10.00 Net extra for dynamo, \$22.00



Two Cylinder 12 H. P.

Bore, 6 inches; stroke, 7 ½ inches; weight, 1075 pounds, without reverse gear; weight, 1370 pounds with extension base and reverse gear; diameter of fly wheel, 24 inches; diameter of crank shaft, 2¼ inches.

Height center of crank up, 31 inches. Center of crank down, 73% inches. Width of space between foundation blocks, 15 inches Width of base over all, 19½ inches. Length over all, 30 inches. Length of foundation, 22½ inches

When reverse gear is attached, add 253/4 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL { 350 Normal. 100 Minimum.

One 2-inch pipe outlet for both exhaust ports.

12 H. P. Two Cylinder Four-Cycle Outfit No. H6 Motor.—Coil, switch, batteries, muffler (if desired), set of tools, starting lever, float feed carburettor, plunger pump attached, 7-feed multiple oiler, and instruction book.

PRICE: \$375.00

Net extra for dynamo, \$22.00



Outfit No. H7 12 H. P. Two Cylinder Four-Cycle Motor.—Reversible two-blade 26-inch propeller, including bronze stuffing box, steel shaft and levers complete, coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/2-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$420.00

Net extra for Tobin bronze shaft for salt water, \$18.00

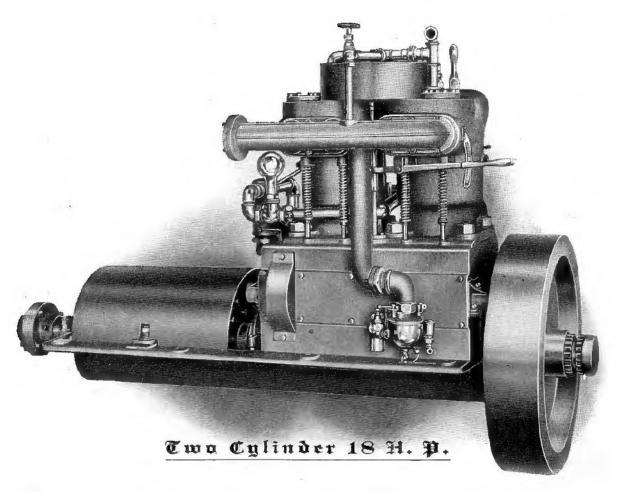
Net extra for dynamo, \$22.00



Outfit No. H8 12 H. P. Two Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers and fittings, coupling, 10 feet 1 1/2-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 24-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$480.00

Net extra for Tobin bronze shaft for salt water, \$18.00
Net extra for dynamo, \$22.00



Bore, 7 inches; stroke, 9 inches; weight, 1646 pounds, without reverse gear; weight, 1969 pounds, with extension base and reverse gear; diameter of fly wheel, 28 inches; diameter of crank shaft, 2½ inches.

Height center of crank up, 35 inches. Center of crank down, 85% inches. Width of space between foundation blocks, 1714 inches. Width of base over all, 22½ inches. Length over all, 33½ inches. Length of foundation, 26 inches.

When reverse gear is attached, add 29 inches in length to above dimensions for foundation.

SPEED: CHANGED INSTANTLY AT WILL \ 350 Normal. 100 Minimum.

One 21/2 inch pipe outlet for both exhaust ports.

Outfit No. H9 18 H. P. Two Cylinder Four-Cycle Motor.—Coil, switch, batteries, muffler (if desired), set of tools, starting lever, float feed carburettor, plunger pump attached, 7-feed multiple oiler, and instruction book.

PRICE: \$585.00

Net extra for dynamo, \$22.00



Outfit No. H 10 18 H. P. Two Cylinder Four-Cycle Motor.—Reversible two-blade 30-inch propeller, including bronze stuffing box, steel shaft, levers complete, also coupling, set of tools, spark coil, two-pole switch, dry batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/2-inch brass unions, 20feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

PRICE: \$650.00

Net extra for Tob water, \$20.00
Net extra for dynamics. Net extra for Tobin bronze shaft for salt Net extra for dynamo, \$22.00



Outfit No. H 11 18 H. P. Two Cylinder Four-Cycle Motor.—Reverse gear, clutch, levers and fittings, coupling, 10 feet 134-inch steel shaft, bronze stuffing box, end bearing, solid three-blade 28-inch bronze propeller, set of tools, coil, switch, batteries, muffler (if desired), ball thrust and bearing, plunger pump attached, starting lever, 18 feet of rubber covered insulated copper wire, lag screws, 1-inch three-way sea-cock, float feed carburettor, two 1/8-inch brass unions, 20 feet of copper pipe, two 1/8-inch gasolene globe valves, 7-feed multiple oiler, and instruction book.

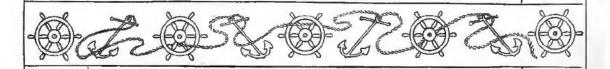
PRICE: \$720.00

Net extra for Tobin bronze shaft for salt water, \$20.00

Net extra for dynamo, \$22.00

GUARANTEE

satisfactorily and steadily under all conditions of weather, when properly installed and ordinary intelligent care and attention are given to same. The engines are all carefully tested before being sent away from the works. We also guarantee them for one year against any imperfection in workmanship and material, and any defective parts will be replaced if returned to our works carriage prepaid, provided that the repairs are not necessary because of improper uses or neglect.



T E R M S

T WENTY-FIVE per cent. of price of the engine must accompany order, the balance to be paid when engine is ready for shipment or sight draft against bill of lading. We usually have engines in stock ready for shipment, and it is always best to send full amount with order as this frequently avoids delays in shipping as well as facilitating delivery at destination.

The engines are carefully and securely boxed or crated, and are delivered f. o. b. cars Buffalo without charge for packing or carting.